SECOND EDITION

CANADA'S APPROACHING PERIL

THE FOREST A VITAL NECESSITY IN REGULATING WATER POWERS AND SUSTAINING AGRICULTURE

WARNINGS FROM THE HISTORY OF DEAD AND DYING NATIONS

THE UNRESTRICTED EXPORT OF PULPWOOD A MENANCE TO THE COUNTRY

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PREFACE TO THE FRENCH EDITION.

The Province of Quebec is a marvel among the countries of the western hemisphere in respect of its water powers and its forests. So far as geographical discoveries have disclosed, no region of the earth is possessed of water-powers so numerous and on such a colossal scale. Hundreds of these powers are yet unutilized, and many rivers, known, from the elevations they traverse, to contain large water-powers, are still unexplored by white men. In northern and eastern Quebec, and accessible to many of these rivers, are vast stretches of timber land, specially adapted to the production of pulp, and the province is peopled by a race of men who cannot be equalled for their skill in wood craft. As ample water supply is an essential to the manufacture of mechanical wood pulp, here is a combination of circumstances which ought to make Quebec the greatest pulp and paper manufacturing country in the world. To realize this great distinction, it is only necessary that the people of the province should first understand the facts and then have the patience and determination to move towards their destiny.

It will be shown in this pamphlet that the benefits created by a pulp and paper industry within our own borders are from ten to a hundred times greater than those arising from the sale of pulpwood for export, and if the export of pulp-wood is prohibited and foreigners are compelled to manufacture here, it will be but a short time before these benefits are realized in the development of this country, simply because the presses of the United States and other countries must have their supplies, and if these are not available at home, they must be obtained in Canada, or in other pulp producing countries. If, with the intention of retaliating, the United States should obtain its supplies of pulp from Scandinavia, then the absorption of the extra supply from Scandinavia would take that much out of the British and European markets and by raising the price there, so open the British and European markets to Canadian pulp. There is no doubt that the world's supply of raw material for pulp and paper is diminishing, not increasing, and the fact that American mills are each year becoming more and more dependent on Canada for the supplies of pulpwood which their own depleted forests can no longer furnish, puts it out of the power of that country effectively to retaliate against Canada for any new policy we may adopt to protect our own interests. The United States is not likely to attempt any such retaliation. There is no measure that country could take which would not work a greater injury to itself than to Canada. The simple fact that Canada buys twice as much from the United States as the United States does from Canada (the exact figures for 1906 being $97,806,552 of exports to the United States, and $175,862,071 of imports from the United States, largely manufactured goods), shows who would suffer most from tariff recrimination.

It is in the power of the Dominion, but not of the Provincial, Government to prohibit such exports.

The policy of holding our own pulpwood, and with this raw material building up a Canadian pulp and paper industry, is not only safe in a political sense, but it is the only thing we can do for self-preservation and the maintenance of the resources which God has entrusted to the keeping of the Canadian people.

To all the other provinces, the preservation of the forests is one of the great questions the present generation has to deal with, but to Quebec it is the problem of all problems. When the present accessible supplies of timber are exhausted to supply American mills, it will cost the province millions more than the present income from pulpwood to build railways to get supplies from regions beyond, so that the selling of our present stock of available pulpwood for the mere price of the raw material only puts further away the chance of building up the home industry. If the people really understand the situation and are determined to create the industry for which nature has given the province such unique facilities in raw material, cheap power and reliable labor supply, men now grown to manhood will be still living when Quebec will be supplying pulp or paper, or both, to half the world. With such an industry established and furnishing ever increasing employment in skilled labor, we should no longer complain that the sons of Quebec have to seek in the United States the opportunities of life now denied them at home.

That the policy of building up a home pulp and paper industry would be better from every aspect, than exporting raw pulpwood, must be evident from the history of the trade for the past four years. In 1903, the average price of spruce wood "in the rough" delivered at Quebec stations for export was $3 to $3.50 per cord; at the present time, it is $6 to $7 a cord in the Eastern Townships, while rossed wood is from $8 to $10 a cord in the same localities. Calculating the total Quebec exports of this year at 500,000 cords, the province has thus lost over $2,000,000 on the dealings of a single year. Had the export of pulpwood been prohibited in 1903, and had only the amount exported since then been made into pulp and paper, the province would to-day be better off by several millions of dollars, while profitable employment would have been had for thousands of our citizens who have had to go away for want of work at home. Meanwhile, the price of the pulpwood sold to the Canadian mills, being regulated ultimately by the world's demand for paper and pulp, would have been as good as if exported. By a wise regulation of the cutting of wood and a rational treatment of our forests, the pulp and paper industry of Quebec would by to-day have been so far advanced that the foundations would have been laid for an export trade which no other country could take from us, simply because the natural conditions for the maintenance of this industry are overwhelmingly in our favor.

But these considerations are not the most serious features of the alternative now before the people of the province. It is known that the spring floods in the Eastern Townships which each decade are becoming more disastrous in sweeping away bridges, etc., and in damage to land, are caused by stripping the forests away from the land around the sources of the streams, and the drying up of many of the small streams, once perennially flowing, is due to the same cause. Further, the increase, in

recent years, of summer droughts is no doubt due to the like cause, and such changes developed over a larger area of the great valley of the St. Lawrence will reduce the productivity of the farms and will especially damage the dairy and cattle raising industries which now form the mainstay of the province's agricultural population. The bare possibility of such a wholesale impoverishment of the resources of the province is appalling, and the people of Quebec may well ask themselves:—"Are the few dollars derived now from the sale of pulpwood any compensation for the destruction of resources so vital to the future well-being of the land?" Has the present generation any right to sell away for such paltry consideration that which is necessary for the very existence of their children? Have we any right to bequeath an inheritance of poverty where nature has given the opportunity for profitable industry and the increased comfort of a numerous people? The French-Canadian with his love of children and his strong family affections will be the last man on earth to calmly contemplate such a future for his people, but the indiscriminate wiping out of the forest for the mere purpose of selling pulpwood, without the creation of a pulp and paper industry, and without regard to the effect on climate, rainfall and water-powers, is national suicide. It is, therefore, the duty of every Canadian who would make his country more prosperous and powerful to see that the forest is so scientifically treated that it will be a perpetual blessing, so that it may shelter and maintain the millions of posterity as it sheltered and nourished the little band of pioneers who first made their homes on the banks of the St. Lawrence.

A NATIONAL PROBLEM.

Thoughtful men are beginning to realize that, apart from the mines and the harvests of the sea, the foundation of our material wealth is the soil and the foundation of soil tillage is the forest. The marvellous achievements due to the control of electricity and the relation of water-power to electrical energy bring home to those who study cause and effect the truth that the greatest asset in the material power of a nation in the twentieth century is the forest. Moreover, a survey of history shows that the decline and impoverishment of some of the greatest nations of ancient and modern times can be traced to the destruction of their forests,—Mesopotamia among ancient nations* and Spain among modern being striking examples.

It has been demonstrated that the planting of forests in a treeless country has increased and regulated the rainfall, and it has been proved with equal certainty that the stripping of the trees from a forested region has made the water supply irregular, and made fertile lands arid.

Lessons of History—Ancient and Modern.

The effect of forest destruction in decreasing the regular flow of rivers has been shown with lamentable consequences in parts of Canada and the United States. For instance, the clearing of the forests from the Alleghany Mountains has reduced those regions to comparative sterility, and has been the direct cause of such fearful calamities as the Johnstown flood, which swept away almost a whole city during the spring freshet which broke up a reservoir. From a like cause, the spring floods which cause frequent disasters and destruction of property in the valleys of the Grand River and Thames River in Ontario, and of the St. Francis and Magog rivers in Quebec, are due to the destruction of the forests on the hills from which the tributaries of those rivers spring.† In those districts, there are men still living who remember streams now completely dry in the summer, which once ran all the year round and furnished power enough to drive mills. The simple reason for such a

*Prof. W. K. Prentice, of Princeton University, recently explored a part of Northern Syria, about forty square miles in extent, and in this district he found the ruins of about 150 ancient towns which flourished from the fourth to the sixth centuries, many of them having from 3,000 to 30,000 inhabitants, and one of them—the famous city of Antioch—having half a million. The hills of this district belong to the chain which furnished the celebrated cedars of Lebanon. Many of these towns are entirely deserted, others occupied by two or three families in squalid dwellings, while Antioch itself has only 30,000. The professor gives the most complete evidence that the ruin of this once wealthy region was brought about by the destruction of the forests, and points to it as a solemn warning to his fellow-countrymen.

†The flood damage along the Ohio River alone has been $18,000,000 in the past four years.

change is that where forests surround the sources of a river, the snow and rain pass more gradually into the earth and into the tributary brooks, so that the flow of the river is more steadily maintained throughout the year; but if the trees are stripped from these hills, the snows and rains are carried away down the streams in torrents in the spring, leaving the streams low or completely dry in the summer. These sweeping freshets not only cause the destruction of bridges and loss of property, but they wash off the richer surface soil, and where this soil is thin, the land is sometimes reduced to such barrenness that it is incapable of either raising grain or again growing trees. Such desolating changes have been brought about in more than one place in the provinces of Quebec, New Brunswick and Ontario within the past hundred years.

The Source of Power.

When we appreciate the growing importance of water-power as a generator of electricity, and when we remember that vast regions of Canada—for example, Ontario, Quebec, New Brunswick, and Prince Edward Island—are devoid of any large deposits of coal, we see the vital importance of maintaining the water-powers of our rivers and streams at their greatest efficiency, if our manufacturers are to thrive in competition with countries having cheap coal. We may thus see what a crime it would be to our posterity if by one supreme act of folly we reduced whole regions of our fertile country to barrenness, and, at the same time, crippled the water-powers on which our future industries must depend.

As past generations of Canadians and Americans have had to clear away the woods to found settlements, and as forests have abounded over an enormous area of North America, many of us have by education imbibed the false notion that trees are an enemy to be got rid of rather than an asset vital to our national prosperity.

In the United States where forest destruction has been carried on to a more disastrous extent than in Canada, people are waking up to the fact that the forest is a national necessity, and, in about forty States of the Union, State legislation has been passed or is being prepared to preserve existing forests and restore those already wasted, especially those at the head waters of the more important streams and rivers.

The Fearful Possibilities of the Press.

Among the destructive agents in the wasting of the world's forests in recent years, the printing press stands pre-eminent. The experiments of Keller, in Germany, in 1844, by which pulp was produced by grinding wood, and the further experiments of Watt and Burgess in England in 1854, when pulp was made by a chemical process, resulted in greatly cheapening the cost of paper, especially those classes used for newspapers. The method of converting wood into pulp by mechanical grinding was introduced into the United States about 1870, and in ten years this process brought down the price of news print from 9 cents to 4 cents per lb. Since then the improvement of processes and the extension of the industry have further reduced the price till recently it sold at 2 cents a pound. This cheapening has made possible the enormous increase in the size and circulation of the modern daily newspaper—one of the marvels of the age, and as fearful in its possibilities of evil as grand

in its possibilities of good to the world. To satisfy this hungry demand of the daily press, the forests of spruce, fir, balsam and poplar in the United States have been slain by counties and States, until now those who have studied the situation begin to realize that America's supply of cheap pulp is at an end, because the remaining areas of pulp timber are either inaccessible or insufficient. Year by year, the United States pulp manufacturers have to go further away for their supplies of timber within their own territory, and year by year, they have had to draw to an ever increasing extent upon the forests of Canada for pulpwood. During the year ending June, 1907, the United States imported pulpwood from Canada to the amount of 650,366 cords, or enough to manufacture say 520,000 tons of news paper, while its imports of ground pulp from Canada were 149,827 tons, valued at $3,230,272. Besides this it imported pulp from other countries, chiefly Norway, to the amount of 63,283 tons valued at $3,118,585, largely chemical pulp. These are official figures of the United States, but while the Canadian official returns show an export to the United States of 452,846 cords in the nine months ending March, 1907, or at the rate of over 603,794 cords for the year, it is the opinion of the "Pulp and Paper Magazine of Canada" that the actual quantity of pulpwood shipped to the United States amounts to from 800,000 to 1,000,000 cords per year. Reasons for this estimate are given in a paper to be found in the Canadian Forestry Association's Report for 1906. According to a special report of the United States Census Bureau the consumption of domestic spruce wood used by United States pulp mills increased 47 per cent. in quantity, and 122 per cent. in price in the five years from 1900 to 1905, while the consumption of Canadian spruce wood by United States mills increased 102 per cent. in quantity, and 150 per cent. in price in the same period. The general cost of wood used for mechanical and chemical pulp was more than doubled in the five years named, for every variety of pulpwood except domestic poplar. Canadian poplar had increased 176 per cent. If these percentages could be applied to the conditions in 1907 the increase would be still greater.

A World's Problem.

As the increase in the number and circulation of newspapers proceeds throughout the world, the difficulty of supplies must increase, unless some substitute, not yet practicable, is discovered for pulp from wood, so that what is now a national problem to the United States and other large paper manufacturing countries, will be a world's problem a few years hence. It is not alone the ever growing demand of the newspaper press, but the manifold uses of wood in other arts which is laying waste the forests of North America, and bringing this crisis near. Industrial statistics recently compiled show that while steel, concrete and other materials are increasing so rapidly for structural purposes, the consumption of wood is greater per head of population in civilized countries than ever before.

The vast expansion of manufacturing in America has brought about this exhaustion of its surplus timber so swiftly that it is only now beginning to be comprehended. It is but a few years, for example, since official documents spoke of the timber supplies of the State of Michigan

as inexhaustible; but to-day large numbers of the wood-working establishments of that State have to import their raw materials from other parts of the continent, and the saw mills have had to depend for their operations on logs imported from Ontario, until the recent law of that province compelled the cutting of the logs on the Canadian side, to the great advantage of the Ontario lumber industry. The pulp mills of northern New York* having eaten into the heart of the Adirondack Mountains have now to turn to Canada for a greater proportion of their supplies, while the pulp mills of Wisconsin, supposed also to have an inexhaustible supply of raw material in their own State, have, during 1907, been compelled to haul pulpwood by rail to the extent of about 70,000 cords all the way from the Province of Quebec to eke out their supplies. The last-named development is to some extent due to the conditions of water supply and difficulty of getting timber from the woods, but the irregular water supply is itself due to the exhaustion of the great forest areas and all the facts tend to show the sure approach of the great crisis referred to, and to explain why some twenty-seven states of the American Union have already introduced, while a dozen other states are preparing to introduce, legislation to check this devastation and recover, if possible, the waste already wrought.

Apart from the Adirondacks and the Wisconsin and adjoining regions, the forests of Maine have been cited as furnishing inexhaustible supplies of timber, and as being able to supply the pulp mills of the United States for all time. No doubt these estimates have been believed by those who made them, as was the case with those who believed the forests of Michigan were sufficient for that State's needs, but it is a noteworthy fact that during the present year the International Paper Co., of New York, has obtained wharfing facilities at Portland, Me., to which port it is bringing vessels with cargoes of pulpwood from the coasts of Quebec and New Brunswick for its own mills in New England, some of them in the State of Maine itself, while other American companies have obtained large timber limits in New Brunswick, Nova Scotia, and Northern and Eastern Quebec, with the same object of keeping up the supplies of wood no longer obtainable at home, except at greater expense. Counting the negotiations under way at the present moment for the acquisition of timber tracts in Eastern Canada, United States paper and pulp companies have purchased from 12,000 to 15,000 square miles of Canadian spruce limits. The Union Bag and Paper Co., which owns over 2,000 square miles of spruce limits in Quebec, recently explained to its shareholders, as the reason of reducing its dividend from 7 to 4 per cent., that it was necessary to acquire large bodies of timber in Canada "on account of the rapid increase in the market price of pulpwood, and the rapid disappearance of the spruce forests of this continent." This is, of course, the only reason the other large companies have for buying timber lands in Canada.

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*The 108 pulp mills of New York have a yearly capacity of 987,000 cords of wood, and estimating a growth of 10 cords per acre, these mills would strip close upon 100,000 acres per year. If to this is added the cut for the lumber mills of the State, (estimated by the census of 1900 at about 245,000,000 feet), such a rate of consumption would exhaust the whole spruce supply of the Adirondacks in seven years, if these mills were confined to the timber of that region.

A Land of Illimitable Limits?

Canada has the largest forest area of any country in the world, and has also a far greater aggregate of water-power than any other country. Considering the relation of forests to water-powers, and the relation of water-power to electrical energy in a country largely deficient in coal,—at least in its central provinces,—and considering further the relation of forests to those industrial arts in which Canada excels, the conservation of those forests becomes the gravest problem in the whole range of our material life.

The area of the forests of Canada is estimated by Dr. Robt. Bell, of the Geological Survey of Canada, at 2,600,000 square miles, or about 1,657,600,000 acres, of which over half may be in pulpwood. This may appear to afford us timber limits illimitable, but huge areas of these timber lands are inaccessible and will remain so until vast sums of money are expended for transportation facilities, while in our more northerly regions, the annual growth and, consequently, the rate of reproduction, is slower than in areas to the south. Hence, we will find in Canada, as those engaged in the timber trade of the United States have already discovered to their dismay, that the stores of wood commercially available, are by no means inexhaustible. We still have this great advantage, that we can profit by the follies and mistakes of our neighbors, and apply the ounce of prevention rather than wait till we need the pound of cure.

The Self-Consuming Zeal.

The zeal and energy of Americans in developing great enterprises, and the devotion of many of them to money, have led them into excesses which have brought suffering to the people, and will, if pursued, cause still more suffering and privation to future generations. The reckless exhaustion of the soil of the western prairies which is largely the cause of the migration of American farmers to the Canadian North-West; the wanton depletion of the white fish and herring on the American side of Lake Erie by American fishermen who after the destruction of their own fishing grounds invaded the Canadian side regardless of Canadian laws or of danger to good relations between two countries; the clamor of the American fur sealing interests for a monopoly of the seal killing in Behring Sea, and the swift decimation of the seals in consequence of securing that monopoly; the fishing by the most destructive methods which has marked the operations of American fishermen on the Atlantic coasts, where many kinds of fish are almost extinct, and where encroachments on the territorial waters of Canada and Newfoundland have caused constant friction between neighboring peoples—these are examples of that zeal or greed for gain which is concerned with its own day and hour, and takes no thought of the claims of posterity.

But the evils that are being brought on the country by all these classes, are of little consequence compared with the destruction of American forests—an evil which in its effects on future generations, may truly be described as the abomination that maketh desolation.

Our Own Danger.

The same tendencies that will wreak havoc upon the United States if allowed to grow, are operating in Canada, but it is the duty of those who can shape our public policy to see that special interests are not permitted for their selfish ends to ruin that greatest of all our natural resources which it has taken a bountiful Providence hundreds of years to create, and whose beneficent influence was intended for the whole people and not for a class.

Canada now stands in two dangers—one the uncontrolled desolation by the hands of its own people of the forests which regulate and maintain the water-powers of our rivers and influence the rainfall upon which successful agriculture must depend in the future—the other, the depletion of those forest areas timbered with spruce, balsam, poplar and other woods, which are being taken out of the country to supply American pulp and paper mills, whose home supplies are being exhausted.

The Case of Quebec.

It is bad that the forests are thus unwisely treated at our own hands; it is worse when we invite outsiders in to assist in destroying the heritage of our children. Even if this matter concerned only the present generation, and the question were only one of an industrial policy for the passing years, it would be unwise, as the following considerations will show. The value of a cord of spruce pulpwood shipped from the Eastern Townships to the United States four years ago was about $3.50 per cord; while a cord shipped in 1907 is worth $6 to $7 in the rough, or $8 to $10 when peeled. To the latter value—the highest valuation in the history of the province and being in itself a confirmation of the preceding statement as to developments in the United States—add the average railway freight, ($3 a cord), and the money left in the province from the export of the cord of wood is say $10. Now if the same cord of wood* is made into ground pulp in Canada, the result would be $20 per cord, and if it were manufactured into news print the value would be $45 per cord, or if into paper of the higher qualities, the value would be $50 to $100 per cord. Applying these results to the pulpwood exported from Canada and taking the returns of the nine months of the official year as correct, the wood now exported to the United States would, if made into paper in Canada at an average of $50 per ton, yield a product worth over $30,000,000 a year.

This takes no account of the results to the railways and the communities affected by the creation of such an industry. The railway freight tariff on pulpwood is the lowest in the whole scale of freight rates in Canada and the United States. On pulp the freight is double that on pulpwood, and on paper about ten times. Then the creation of a paper industry means a great deal of new trade in machinery, supplies and general merchandise; the latter feature adding traffic and industry to the amount of from ten times to one hundred times the value of the traffic and merchandise directly concerned in the paper trade itself. The creation of a large paper industry would cheapen the cost of Canadian, as compared

*A cord of wood will make from 1,850 lbs. to a ton of mechanical pulp.

with foreign papers and would bring into being other industries in paper products not now in existence, such as special kinds of stationery, paper boxes, and utensils made from paper and wood pulp, which are constantly being put on the market in countries whose paper industries are more highly developed than Canada's.

Thus, if Canada's pulpwood were all manufactured at home, industries would arise whose annual value would be millions of dollars, and yet all this could be accomplished while still so regulating the cutting of trees as to maintain the present rate of reproduction, and so conserving the value of our forests forever. Countries like Germany, France, Austria, etc., by scientifically treating their forests, have been able to restore depleted timber tracts and maintain present forest reserves, deriving from them a perpetual revenue which is a source of benefit to the whole nation.

The Saw Log Act of Ontario.

The economic effect of prohibiting the export of pulpwood may be predicted upon the history of the lumber manufacturing relations of Michigan and Ontario. When the lumber manufacturers of Michigan found the timber supplies of their own State becoming depleted they bought timber limits in Ontario and rafted the logs across Georgian Bay and Lake Huron to Michigan where they were made into lumber. This kept the lumber industry of that State active while the same business languished in Ontario, until the Ontario Government prohibited the export of logs. The Michigan mill owners had claimed that they were not dependent on Ontario logs to keep their mills running, but as soon as the Act was put into actual effect they at once began to move their mills to their Ontario limits, and the lumber industry of that part of Ontario has been in a thriving condition ever since, while the establishment of these new mills has also caused a development of general trade outside of the lumber business itself.

What to Do.

The steps best designed to secure to our country the great national inheritance of its forests are;—first, the prohibition of the export of pulpwood and other woods that now go out of the country in an unmanufactured state; and second, the creation of forest reserves on lands which form the chief water sheds of the rivers—especially rivers containing water-powers—and the gradual re-establishment of forests on those lands which investigation would show are better suited for timber growing than for agriculture. Large areas of such lands now exist in the country where, owing to the steadily increasing value of timber in recent years, tree growing will pay better than grain growing.

The pulp and paper industry has been cited as an example showing the advantage, from an industrial point of view, of prohibiting the export of pulpwood. But the creation of a great Canadian pulp and paper industry is only an incidental advantage in such a policy—the greater purpose is national self-preservation. When our forests are despoiled, our water-powers are crippled, our agricultural regions put in danger by alternate drought and deluge, our great dairy and stock-raising indus-

tries must decline for the same reason, and the curse of barrenness must bring its sure blight upon the land as it has done in Spain and Mesopotamia and as it is now doing in great tracts of United States territory.

No matter what the momentary advantage may be to the relatively few whose interests are in favor of exporting wood, we have no right to bring ruin to our children and desolation to our land, for that is what the indiscriminate destruction of the forest means. No one who frankly studies the history of the forests of other lands can fail to realize that, from the material point of view, the forestry question is the question of life and death to this future Dominion. What Canadian worthy of the name would bequeath a wilderness to his children in order that he might live out his own little day with a few extra dollars?

APPENDIX.

The first paper mill in Canada, says the "Pulp and Paper Magazine," was started at Jacques Cartier, Quebec, by a Mr. Jackson, in August, 1800, and was in successful operation till 1857. The second mill was started at St. Andrew's, Quebec, in 1803, the same year in which the Fourdrinier machine, which was to revolutionize paper making, was introduced into England.

According to the census of 1851, Upper Canada had five mills and Lower Canada had also five. The census of 1871 gave 12 mills to Ontario, 7 to Quebec, 1 to Nova Scotia, and 1 to New Brunswick. The census of 1881 recorded 36 paper mills and 5 pulp mills.

The subsequent progress of the pulp and paper industry is recorded in the "Pulp and Paper Handbook of Canada" in the various editions as follows:—

Pulp Mills.

Year.	No. of Mills.	Total capacity in tons per 24 hours.
1888	34	154
1892	37	312
1899	39	1,145
1907	58	2,361

The total capacity of the mills producing chemical pulp by the sulphite and soda processes in 1899 was about 500 tons per day, and in 1907 about 550 tons per day, so that the increase in the last eight years has been almost wholly in mechanical, or ground wood pulp.

Paper Mills.

Year.	No. of Mills.	Total capacity in tons per 24 hours.
1888	40	173
1892	38	209
1899	33	328
1907	46	966

The era of manufacturing pulp from wood in Canada began in the decade of 1880-90. The yearly capacity of its pulp mills at the present time is about 700,000 tons of pulp and 290,000 tons of paper. Pulp first figures in the trade and navigation returns of Canada in 1890, when the total export was valued at $168,180, of which $460 went to Great Britain, $147,098 to the United States, and $20,622 to other countries. In 1897 the total export was $741,959, of which $164,138 went to Great Britain and $576,720 to the United States. In nine months of the fiscal year ending March, 1907, the export of pulp was $2,984,945, of which $558,600

went to Great Britain, $2,397,448 to the United States, and the balance to France, Mexico, Japan, the West Indies, and Italy.

The exports of Canadian-made paper in the nine months of 1907 were valued at $1,657,740, besides $20,412 of wall-papers. Great Britain was the largest importer of paper, the amount sent to that country in the nine months being $920,272, to Australia $333,326, New Zealand $139,687, and to the United States $109,273. This is a large increase in recent years, the exports for the whole of the year of 1903 amounting to less than $900,000, including wall papers.

L. C. Glenn, of the Vanderbilt University, reports on his observations while employed by the North Carolina Geological Survey: "I travelled over most of the South, studying the waterways. I found that most of the rivers, great and small, are filling up with silt and gravel; the dams are being destroyed, while gravel bars are forming to the detriment of commerce. The great Ohio River is being seriously affected. The Government is spending millions in dredging out these channels, but its work is largely neutralized. Silt and gravel are descending from the mountain sides faster than they can be dredged from the rivers.

The cause is the cutting of forests from the Appalachian Mountains. The effect is felt directly by those who navigate the streams or use lumber or water-power; it is felt indirectly by investors or by users of Southern products, wherever they may live. The only remedy is in Government ownership of the forests, controlling the sources of the streams."

Theophilus Parsons, representing New England manufacturing interests, says: "New England is largely dependent upon her factories run by water power. The flow of the rivers furnishing this water power is growing yearly more uncertain. Both floods and droughts are more frequent. It is plenty or famine. This situation is due to the pernicious cutting of woods along the head waters of the New England rivers."

Gifford Pinchot, Chief Forester for the United States Government, on returning to Washington in November 1907, from a six months' tour of inspection, in which he travelled 5,000 miles, issued a statement to the press, in which he said:—

"In twenty years the timber supply in the United States, on Government reserves and private holdings, at the present rate of cutting, will be exhausted, although it is possible that the growth of that period might extend the arrival of the famine another five years." In sounding his warning, Mr. Pinchot urged that the danger in the situation be not underestimated. He said that the United States uses more timber than any other country, and that every man, woman and child will be affected.

This warning has all the more serious import to Canadian as well as American citizens when we remember that estimates compiled as late as 1905 gave the forested area of the United States at 500,000,000 acres